



## NEWS RELEASE

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### **IRRR Board to finish year with major investments in businesses, infrastructure, and education**

EVELETH, Minn.—At its Thursday, December 18, 2014 meeting in Eveleth, the Iron Range Resources and Rehabilitation Board (IRRRB) will consider approval of \$8.45 million in loans and \$7.67 million in infrastructure grants. The projects have a total investment of \$124.2 million. Reinvestments in local mining companies, approval of a new educational initiative, as well as protection of the Douglas J. Johnson Trust Fund (DJJ Trust Fund), are also on the agenda.

The IRRRB will consider innovative and timely loans to two businesses that are facing growth challenges. Two short-term loans will allow the companies the chance to expand their businesses and grow jobs in the region.

Magnetation, LLC of Grand Rapids is seeking a \$6.5 million direct loan to cover expenses incurred during the construction of its fourth plant at the Canisteo Complex. With the additional production of the fourth plant, the company will have the capacity to produce 3.8 million tons of concentrate. The total project investment is \$28 million.

Silicon Energy of Mountain Iron is seeking a \$1.95 million loan to help meet demand for their new, lower-cost Photo-Voltaic solar panel, which will help the company to better compete with foreign manufacturers. The total project investment is \$4.6 million.

The board also will consider over \$7.5 million in infrastructure grants, totaling almost \$92 million in total project investment. These forty projects will allow 59 businesses to grow. It is projected that 444 jobs will be created as a result of the investments.

According to Commissioner Tony Sertich, every dollar invested by the agency in infrastructure is one less dollar that must be raised with local property taxes on local businesses and homeowners. State law requires half of the agency's economic development fund to be invested in infrastructure projects in local communities.

Below is a list of projects that will be reviewed:

Organization	Project Description	Grant Award
City of Aitkin	Infrastructure and site work for assisted living facility	\$130,000
City of Aurora	Upgrade infrastructure on three streets and alleys	150,000
City of Babbitt	Upgrade infrastructure on Elm Boulevard	150,000
Balkan Township	Upgrade fiber to Balkan and French Township	230,211
City of Biwabik	Upgrade infrastructure on Main Street	150,000
City of Bovey	Upgrade infrastructure on three alleys	120,000
Breitung Township	Upgrade infrastructure	150,000

**IRRRB – DECEMBER 18, 2014 BOARD MEETING****PAGE 2**

City of Buhl	Upgrade infrastructure on three avenues	225,000
City of Calumet	Infrastructure on Mesabi Avenue water loop	40,000
City of Chisholm	Upgrade infrastructure on 4th Street	245,000
City of Cohasset	Infrastructure and site work of industrial park Phase II	250,000
City of Coleraine	Upgrade infrastructure on Hawkins Avenue	169,700
Cook County Airport	Expand airport runway	100,000
City of Crosby	Infrastructure and site work for lodging development	150,000
City of Ely	Infrastructure for Vermilion Community College student housing	350,000
City of Ely	Upgrade airport runway	150,000
City of Eveleth	Repair and renovate West Eveleth water tower	200,000
City of Eveleth	Upgrade infrastructure on three streets	150,000
Fayal Township	Upgrade sanitary sewer/lift station	110,000
City of Gilbert	Extend waterline from Gilbert to McKinley	223,000
Greenway Township	Infrastructure and site work for collaborative emergency services facility Phase II	100,000
City of Hibbing	Infrastructure and site work for hotel development	150,000
City of Hibbing	Infrastructure for Brooklyn Area Phase II	250,000
City of Hoyt Lakes	Upgrade and replace storm water collection Phase II	100,000
City of Keewatin	Upgrade infrastructure on 3rd Street South and two alleys	200,000
City of Keewatin	Infrastructure on 2 <sup>nd</sup> and 3 <sup>rd</sup> Avenue water loop project Phase II	20,000
City of LaPrairie	Infrastructure for two business expansions	150,000
Lutsen Township	Upgrade golf course irrigation and infrastructure Phase II	300,000
City of Marble	Replace waterline at five locations	250,000
City of Mountain Iron	Replace storm sewer	60,000
City of Mountain Iron	Replace force main for Mud Lake Road	90,000
City of Nashwauk	Infrastructure on Platt Ave	83,000
City of Orr	Infrastructure on Highway 23	53,099
Range Regional Airport	Expand new airport terminal	250,000
City of Silver Bay	Upgrade wastewater treatment facility	150,000
City of Taconite	Upgrade water infrastructure in Holman Addition	100,000
Tofte Township	Infrastructure for housing project Phase II	120,000
City of Two Harbors	Infrastructure for business development Phase II	150,000
White Township	Extend infrastructure in Gardendale area	150,000
White Township	Upgrade fiber to 25 communities	1,500,000
		\$7,669,010

The Mining Reinvestment Fund also is on the agenda with funding requests from nine iron ore producers totaling \$12.6 million. State law authorizes grants from this fund to Minnesota's iron ore producers. Matching expenditures must be provided. Funds must be used for the following purposes:

- workforce development and associated public facility improvement
- acquisition of plant and stationary mining equipment and facilities for the producer

- research and development in Minnesota on new mining or taconite, iron, or steel production technology.

The board also will consider \$2 million in funding for an initiative created to provide students equal access to world class educational experiences. During the 2014 legislative session, the Iron Range Legislative Delegation championed legislation that provides for the formation of an “innovative cooperative center” known as Education Innovation Partners (EIP) and a portion of taconite taxes set aside for school collaboration projects. A strategic plan has been developed and a governance structure adopted by districts across northern Minnesota.

IRRRB is a state economic development agency headquartered in northeastern Minnesota whose mission is to promote and invest in business, community and workforce development for the betterment of northeastern Minnesota. To learn more about the agency and its services, visit [www.irrb.org](http://www.irrb.org). Follow us on Twitter at <https://twitter.com/IRRRB>.

-END-

**Meeting  
of the  
Iron Range Resources  
and  
Rehabilitation Board**

**IRRRB  
Eveleth, Minnesota**

**Thursday, December 18, 2014 – 10:00 a.m.**

**Meeting of the Iron Range Resources and Rehabilitation Board  
IRRRB, Eveleth, Minnesota  
Thursday, December 18, 2014  
10:00 a.m.**

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**MEETING OF THE IRON RANGE RESOURCES  
AND REHABILITATION BOARD  
IRRRB  
Eveleth, Minnesota  
Thursday, December 18, 2014 – 10:00 a.m.**

**AGENDA**

- 1) Roll Call
- 2) Approval of June 23, 2014, Minutes  
*See Exhibit A*
- 3) Commissioner's Comments
- 4) Magnetation, LLC
- 5) Silicon Energy MN, LLC
- 6) Loan Guarantee Program
- 7) FY 2015 Infrastructure Projects
- 8) Mining Reinvestment Fund
  - a. ArcelorMittal Minorca Mine
  - b. Hibbing Taconite Company
  - c. Northshore Mining Company
  - d. United Taconite LLC
  - e. US Steel – Keetac
  - f. US Steel – Minntac
  - g. Mesabi Nugget, LLC
  - h. Mining Resources, LLC
  - i. Magnetation, LLC
- 9) Education Innovation Partners (EIP)
- 10) DJJ Fund Protection
- 11) Adjournment

**Magnetation, LLC**  
**102 NE Third Street, Suite 120**  
**Grand Rapids, Minnesota 55744**

**IRRRB Direct Loan Program**

<b>Applicant:</b>	Magnetation, Inc.
<b>Project Location:</b>	Bovey, Minnesota
<b>Principal(s):</b>	Larry Lehtinen, CEO Matt Lehtinen, President Joe Broking, CFO
<b>Project Description:</b>	<p>The agency is considering an investment in a loan to Magnetation, Inc. (“Mag, INC”) that would allow it to provide cash to Magnetation, LLC, (“Mag, LLC”), which is a joint venture between Mag, INC and a wholly-owned subsidiary of AK Steel. The funds provided by the project will be used to pay for unexpected expenses incurred during the construction of Plant4 at the Canisteo Complex, on the western part of the Mesabi Range. Mag, LLC experienced some unexpected issues with subsidence in the construction of Plant4 and incurred \$13 million in costs to remedy the situation. The total project is estimated to be \$28 million, with the agency considering a loan of \$13 million (the amount of the cost overrun on Plant4) with the remaining funds coming from an increase in the Senior Secured Credit Facility originated by JP Morgan Chase Bank. DEED is considering funding half of the requested \$13 million through the 21<sup>st</sup> Century Minerals Fund. The latest version of technology being developed and implemented by Mag, INC at Plant4 will not only benefit Mag, INC. but has the potential to be applicable and adaptable to other hematite resources across the Mesabi Range to increase iron recovery, reduce costs, and extend the life span of the conventional taconite operations. Prior to the construction of Plant4, Mag, INC and Mag, LLC had a combined 240 employees all with excellent wages and benefits.</p>
<b>Market Opportunity:</b>	<p>With the addition production of Plant4 coming on line, Mag, LLC has the capacity to produce 3.8 million tons of concentrate. Approximately 3 million tons of concentrate will be used to produce pellets at the newly constructed pellet plant in Reynolds, IN with those pellets being sold to AK Steel under the terms of a pellet supply agreement with an effective term of 30 years. The majority of the remainder of the product is sold to AHMSA, a Mexican steelmaker, under a concentrate supply agreement. In addition, Mag, INC receives 20% of the production of Mining Resources, LLC (“Mining Resources”), a joint venture between Ferrous Resources, LLC (“Ferrous”, a wholly owned subsidiary of Steel Dynamics, Inc.) and</p>

	Mag, INC. Mining Resources currently has the capacity to produce 1 million tons of concentrate annually. The concentrate received by Mag, INC is sold to Mag, LLC under an offtake agreement.	
<b>Project Investment:</b>		
	JP Morgan Chase Bank, Senior Secured Debt Extension, Negotiated Terms	\$15,000,000
	IRRRB*	\$ 6,500,000
	DEED, 21 <sup>st</sup> Century Minerals Fund*	\$ 6,500,000
	<b>TOTAL</b>	<b>\$28,000,000</b>
	*Under the proposed terms, the IRRRB will originate a \$13,000,000 loan, of which \$6,500,000 will be sold to DEED under the terms of a participation agreement. The loan will be for a term of up to two years and carry an interest rate of 10%. The loan will have an effective rate of 5% if repaid within the first year and will have an effective rate of 6.5% if repaid prior to the due date.	
<b>Jobs:</b>	160 Planned New (Plant4) Wages \$50,000 - \$150,000 per year plus benefits	
<b>Collateral:</b>	The loan will be collateralized by an Assignment of Royalties due under a technology license agreement between Mining Resources and Mag, INC. This Assignment of Royalties would result in the payment of \$3.00 per ton (inflation adjusted) of production at Mining Resources.	
<b>Business History:</b>	Mag, INC was established in 2006 and has further developed and refine a proprietary process to recover iron units from existing natural ore and taconite tailings basins. Production began at Plant1 near Keewatin in early 2009. The introduction of the patented Rev3 Separator into an expansion of Plant1 in early 2011 greatly increased efficiencies and brought Mag, INC. to a new level. The company had two major developments in late 2011. First, Mag, INC was formed resulting in the construction of Plant2 in Taconite that came on line in 2012, Plant4 in Bovey that will begin operations yet in 2014 and for which the proceeds of this loan are being sought, and a pellet plant in Reynolds, IN, to supply AK Steel, that began operations late in this year. Also, Mining Resources was formed resulting in Plant3 near Chisholm coming on line in late 2012.	
<b>Past IRRRB History:</b>	The IRRRB closed on a total of four loans consisting of an aggregate principal amount of \$5,485,000 (\$1,000,000 of a loan was participated to DEED) between October 2008 and July 2009. All of the loans were paid as agreed and paid in full in 2011. As a part of the loan transactions the IRRRB and DEED continue to collect a royalty on concentrate produced with the Magnetation technology that currently amounts to \$2.50 per ton. To date, Magnetation has	



	paid the State nearly \$6.6 million (with \$3.9 million being paid to the IRRRB) on 2.6 million tons of production through this royalty agreement. Mag, INC is obligated to pay the royalty on its first 10 million tons of production under the current agreement.
<b>Contingencies:</b>	<ol style="list-style-type: none"> <li>1) Alternate financing structure will be considered as long as the IRRRB position is not materially compromised.</li> <li>2) Borrower will enter into a loan agreement that pledges to repay the debt should it liquidate or otherwise dispose of its ownership interest in Mining Resources and limits dividend payments to shareholders during the term of the loan.</li> <li>3) All proceeds of the loan must be injected into Mag, LLC.</li> </ol>
<b>Technical Advisory Committee Recommendation:</b>	Recommended on December 12, 2014.
<b>Funding Authorization:</b>	Funding for this project is authorized under Minnesota Statutes Section 298.296, Subdivision 2 (d), which allows the Commissioner to expend, within or for the benefit of the Taconite Assistance Area and upon prior approval by an affirmative vote of all members of the Board, the corpus of the Douglas J. Johnson Economic Protection Trust Fund for projects and programs described in Minnesota Statutes Section 298.292, Subdivision 1, that either (a) are designed to create and maintain productive, permanent, skilled employment, including employment in technologically innovative businesses; or (b) encourage diversification of the economy and promote the development of certain sectors of the TAA economy; or (c) for which technological and economic feasibility have been demonstrated.

**Silicon Energy MN, LLC**  
**8787 Silicon Way**  
**Mt. Iron, Minnesota 55768**

**IRRRB Direct Loan Program**

<b>Applicant:</b>	Silicon Energy MN, LLC	
<b>Project Location:</b>	8787 Silicon Way Mt. Iron, Minnesota 55768	
<b>Principal(s):</b>	Newport Partners	
<b>Project Description:</b>	Operating funds for calendar year 2015, including raw materials, inventory and manufacturing expenses.	
<b>Market Opportunity:</b>	Silicon Energy MN has developed a new, more competitive product for the Minnesota market. This product is eligible for the Minnesota Department of Commerce "Made in Minnesota Solar Incentive Program" at a higher incentive than competitor's products. Silicon Energy MN believes this will allow them to gain a large share of the market.	
<b>Project Investment:</b>		
	Company	\$2,702,357
	IRRRB The loan will be for a term of up to 18 months and carry an interest rate of 10% and will have an effective rate of 3% if repaid prior to the due date.	1,950,000
	<b>TOTAL</b>	<b>\$4,652,357</b>
<b>Jobs:</b>	4 Planned New Wages \$12.75 - \$26.44 per hour plus benefits	
<b>Collateral:</b>	Inventory and Accounts Receivable, Guaranty of majority owner.	
<b>Business History:</b>	The company was formed in 2010 to manufacture solar panels in Mt. Iron, MN.	
<b>Past IRRRB History:</b>	In 2006, IRRRB approved a loan of \$1,500,000 to Silicon Energy MN for manufacturing equipment. The loans is current.	

<b>Contingencies:</b>	None.
<b>Technical Advisory Committee Recommendation:</b>	Recommended on December 12, 2014.
<b>Funding Authorization:</b>	Douglas J. Johnson Economic Protection Trust Fund: This project is authorized under the provisions of the Douglas J. Johnson Economic Protection Trust Fund Act (Minnesota Statutes sections 298.291-298.298) pertaining to expenditures of Douglas J. Johnson Economic Protection Trust Fund monies for economic development projects in that these statutes authorize small business development loans to private enterprises for the purposes of job creation and economic development within the Taconite Assistance Area defined in Minnesota Statutes Section 273.1341.

## Loan Guarantee Program



P.O. Box 441  
4261 Highway 53 South  
Eveleth, Minnesota 55734-0441  
(218)735-3000 • 800-765-5043  
Fax: (218)735-3047

**To:** Iron Range Resources and Rehabilitation Board Members  
Commissioner

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: LOCAL BUSINESS LOAN GUARANTY PROGRAM**

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Initially capitalized in 2011 with \$1 million, the Local Business Loan Guaranty Program has spurred bank loans totaling over \$2 million to 25 local businesses. Working with local banks and other lending institutions, this program has achieved great success in working with local businesses, including those that currently are not eligible for funding under established agency guidelines.

This program provides loan guarantees of up to \$75,000 to local businesses under the guidelines.

As of December 12, 2014, there are 19 guarantees in place on loans totaling \$1,531,489. We continue to receive inquiries; however, only \$40,887 remains uncommitted and available. I recommend re-capitalizing this program with an additional \$350,000 from our current Business Development Project funds budget.

## FY 2015 Infrastructure Projects



P.O. Box 441  
4261 Highway 53 South  
Eveleth, Minnesota 55734-0441  
(218)735-3000 • 800-765-5043  
Fax: (218)735-3047

**To:** Iron Range Resources and Rehabilitation Board

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: FY15 INFRASTRUCTURE PROJECTS**

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### PURPOSE

The Infrastructure Grant program provides funds for cities and townships that can be used for infrastructure, site work, or healthcare capital projects that support community and economic development. State law requires half of the agency's economic development fund to be invested in infrastructure projects in local communities.

### ECONOMIC IMPACT

FY 15 infrastructure grants	<b>42*</b>
• Development projects	<b>17</b>
• Water/Sewer projects	<b>25</b>

*\*Includes two infrastructure grants approved by the Board at its June 23, 2014, meeting.*

IRRRB investment	<b>\$8,149,010</b>
Total public/private investment	<b>\$101,956,006</b>
Leverage	<b>11.5 to 1</b>

Businesses directly impacted	<b>59</b>
New jobs to region	<b>527</b>
• Permanent jobs	<b>49</b>
• Construction jobs	<b>478</b>

\*Indicates aid to business or immediate job growth

**\*City of Aitkin**

**Grant Amount: \$130,000**

Infrastructure and site work for a new 35 unit assisted living facility in Aitkin. The proposed development includes the renovation of a 35,362 sq. ft. facility, which used to be the old armory building. The project is projected to create 26 construction jobs and 10 permanent jobs.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and site work	\$139,975	IRRRB	\$130,000
Assisted living facility	3,723,189	Private	3,912,000
A&E	32,000		
Contingency	146,836		
<b>TOTAL</b>	<b>\$4,042,000</b>	<b>TOTAL</b>	<b>\$4,042,000</b>

**City of Aurora**

**Grant Amount: \$150,000**

Replacement of water, sewer, storm sewer and roads, on various streets to include 1<sup>st</sup> Street East, 4<sup>th</sup> Avenue North, 5<sup>th</sup> Avenue North and several alleys.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and roads	431,595	IRRRB	\$150,000
A&E	43,414	City	402,700
Contingency	77,691		
<b>TOTAL</b>	<b>\$552,700</b>	<b>TOTAL</b>	<b>\$552,700</b>

**City of Babbitt**

**Grant Amount: \$150,000**

Water, sewer and street reconstruction for Elm Boulevard. This will begin to address a large amount of inflow and infiltration (I & I) in the area.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and roads	\$626,542	IRRRB	\$150,000
A & E	106,512	City	427,036
Contingency	93,981	CDBG	250,000
<b>TOTAL</b>	<b>\$827,036</b>	<b>TOTAL</b>	<b>\$827,036</b>

**\*Balkan Township**

**Grant Amount: \$230,211**

A project in Balkan and French Townships to construct 15.5 miles of new fiber to improve service to 450 unserved subscribers including 10 businesses, Balkan Town Hall, Town of French Community Center, and French Fire. The new fiber will support higher broadband speeds.

<u>USES</u>		<u>SOURCES</u>	
Fiber Infrastructure	\$664,374	IRRRB	\$230,211
A & E	26558	DEED	230,211
Contingency		Century Link	230,510
<b>TOTAL</b>	<b>\$690,932</b>	<b>TOTAL</b>	<b>\$690,932</b>

**\*City of Biwabik**

**Grant Amount: \$150,000**

Replacement of water, sewer, storm water and roads on 4<sup>th</sup> Ave North and adjacent alley and parking lot. Road reconstruction for 2<sup>nd</sup> Avenue South, 2<sup>nd</sup> Avenue North, 3<sup>rd</sup> Avenue North and 1<sup>st</sup> Street South.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and roads	\$592,000	IRRRB	\$150,000
A & E	131,000	City	433,000
Contingency	60,000	CDBG	200,000
<b>TOTAL</b>	<b>\$783,000</b>	<b>TOTAL</b>	<b>\$783,000</b>

**\*City of Bovey**

**Grant Amount: \$120,000**

The replacement of water, sewer lines and alley reconstruction on South Second alley, North Second Street alley and South Second Avenue East alley. The alley drainage improvements will correct storm water issues impacting a local business.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and roads	\$192,345	IRRRB	\$120,000
A & E	39,000	City	129,000
Contingency	17,655		
<b>TOTAL</b>	<b>\$249,000</b>	<b>TOTAL</b>	<b>\$249,000</b>

**Breitung Township**

**Grant Amount: \$150,000**

Tower-Breitung wastewater board project consists of water plant, tower and water main replacements and upgrades.

<u>USES</u>		<u>SOURCES</u>	
Water plant and water main	\$446,650	IRRRB	\$150,000
A&E	31,257	City	210,272
Contingency	17,365	CDBG	135,000
<b>TOTAL</b>	<b>\$495,272</b>	<b>TOTAL</b>	<b>\$495,272</b>

**City of Buhl**

**Grant Amount: \$225,000**

The replacement of water, sewer lines and street reconstruction on Frantz Avenue, Southern Memorial Drive and Whiteside Avenue.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer	\$383,605	IRRRB	\$225,000
A & E	45,130	City	76,300
Contingency	22,565	CDBG	150,000
<b>TOTAL</b>	<b>\$451,300</b>	<b>TOTAL</b>	<b>\$451,300</b>

**\*City of Calumet**

**Grant Amount: \$40,000**

New waterline to create a water main loop approximately one block long to accommodate a 16-unit apartment complex. The new larger water main to loop the system will increase flow substantially to the complex, as well as to the nearby hydrant for firefighting.

<u>USES</u>		<u>SOURCES</u>	
Water line	\$51,000	IRRRB	\$40,000
A&E	6,000	City	20,000
Contingency	3,000		
<b>TOTAL</b>	<b>\$60,000</b>	<b>TOTAL</b>	<b>\$60,000</b>

**\*City of Chisholm**

**Grant Amount: \$245,000**

The project is a collaboration between the City of Chisholm and Chisholm Independent School District 695. The project consists of improvements to 4<sup>th</sup> Street SW that include city replacement of water mains, sanitary sewer lines, storm sewers and street reconstruction, abandoning sections of streets, additional school parking and traffic safety controls.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and roads	\$459,666	IRRRB	\$245,000
A & E	122,565	City	105,750
Contingency	30,644	School District	262,125
<b>TOTAL</b>	<b>\$612,875</b>	<b>TOTAL</b>	<b>\$612,875</b>

**\*City of Cohasset**

**Grant Amount: \$250,000**

Phase II Cohasset Industrial Park Development consisting of road construction and the extension of new infrastructure to include water, sewer, electric, fiber optics and natural gas. The city will be developing 15 new commercial/industrial lots and plans to have the lots ready new businesses by September 1, 2015.

The city's Phase I Industrial Park is at capacity with seven companies that provide 47 FTE positions and have a total building investment of \$3,473,000. The project is projected to create 21 construction jobs.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and gas	\$1,772,000	IRRRB	\$250,000
Land	1,235,000	City	2,937,000
A&E	120,000		
Contingency	60,000		
<b>TOTAL</b>	<b>\$3,187,000</b>	<b>TOTAL</b>	<b>\$3,187,000</b>



**City of Coleraine****Grant Amount: \$169,700**

Infrastructure upgrades to include sanitary sewer, storm sewer, water and street reconstruction on Hawkins Avenue. The infrastructure being replaced is extremely deteriorated and has had six breaks in the last four years.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Infrastructure	\$287,632	IRRRB	\$169,700
A&E	47,459	Cities	\$194,154
Contingency	28,763		
<b>TOTAL</b>	<b>\$363,854</b>	<b>TOTAL</b>	<b>\$363,854</b>

**\*Cook County****Grant Amount: \$100,000**

Cook County Airport runway extension and widening project consists of the extension and the expansion of the current runway from 4,200 feet to 5,000 feet. The extension and widening will enable large wild fire fighting aircraft, all weather medical evacuation aircraft and larger multi-function commercial and private aircraft. The project is projected to create 14 construction jobs.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Runway reconstruction and extension	\$4,140,000	IRRRB	\$100,000
A & E	860,000	FAA	4,500,000
		County	400,000
<b>TOTAL</b>	<b>\$5,000,000</b>	<b>TOTAL</b>	<b>\$5,000,000</b>

**\*City of Crosby****Grant Amount: \$150,000**

The project consists of water, sewer, roads and site work for a lodging development in the city Crosby. The development includes seven year round cabins and a 20-site campground. The project is projected to create 8 construction jobs and 2 permanent jobs.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Infrastructure and site work	\$704,500	IRRRB	\$150,000
Development	493,555	Developer	1,065,170
A & E	17,115		
<b>TOTAL</b>	<b>\$1,215,170</b>	<b>TOTAL</b>	<b>\$1,215,170</b>

**\*City of Ely**

**Grant Amount: \$350,000**

The Vermilion Community College Student Housing Project consists of infrastructure, utility extension and site work for a new 120-bed housing complex. This development will replace the current 84 modular housing beds that have surpassed their life expectancy and afford Vermilion an additional 36 beds to alleviate their current new student housing pressures. The project is projected to create 38 construction jobs and 3.5 permanent jobs.

<u>USES</u>		<u>SOURCES</u>	
Infrastructure, roads and utilities	\$436,000	IRRRB	\$350,000
Housing complex	4,544,150	Vermilion C.C.	4,350,000
A & E	600,610	MHFA	1,100,000
Contingency	219,240		
<b>TOTAL</b>	<b>\$5,800,000</b>	<b>TOTAL</b>	<b>\$5,800,000</b>

**\*City of Ely**

**Grant Amount: \$150,000**

The Ely Airport Runway Reconstruction and Lighting Project is comprised of total runway reconstruction and lighting replacement. The current runway is 5,600 feet and it needs to be completely rebuilt. Required to complete the project are 41,000 cubic yards of new subgrade, and 22,000 tons of black top. The airport services commercial and private sector businesses, mining and tourism market and also provides for the multi-state wildfire and forest fighting capabilities of the U.S. Forest Service. The project is projected to create 27 construction jobs.

<u>USES</u>		<u>SOURCES</u>	
Site work and runway reconstruction	3,822,739	IRRRB	\$150,000
A&E	290,000	FAA	3,701,465
		City	261,274
<b>TOTAL</b>	<b>\$4,112,739</b>	<b>TOTAL</b>	<b>\$4,112,739</b>

**City of Eveleth**

**Grant Amount: \$150,000**

Replacement of the sanitary sewer lines and storm sewers on Jackson, Monroe, and Garfield Streets. The sewer lines being replaced have been a major contributor to the cities inflow and infiltration.

<u>USES</u>		<u>SOURCES</u>	
Sewer, storm sewer and road	\$353,220	IRRRB	\$150,000
Engineering	67,112	CDBG	150,000
Contingency	35,322	City	155,654
<b>TOTAL</b>	<b>\$455,654</b>	<b>TOTAL</b>	<b>\$455,654</b>

**\*City of Eveleth**

**Grant Amount: \$200,000**

The water tower project consists of interior and exterior structural repairs and coating replacement. The water tower serves approximately 500 residents in West Eveleth and the city of Leonidas and the city's largest water consumer, United Taconite.

<u>USES</u>		<u>SOURCES</u>	
Water tower renovation	508,300	IRRRB	\$200,000
A&E	55,500	City	414,630
Contingency	50,830		
<b>TOTAL</b>	<b>\$614,630</b>	<b>TOTAL</b>	<b>\$614,630</b>

**Fayal Township**

**Grant Amount: \$110,000**

Upgrade to existing SCADA (Supervisory Control and Data System) in the Town of Fayal's lift station system. This system sends an alarm when a lift station fails. Town of Fayal has 30 lift stations spread throughout the township. The upgrading of the system will ensure rapid response time.

<u>USES</u>		<u>SOURCES</u>	
SCADA System	\$294,570	IRRRB	\$110,000
Engineering	25,000	Township	239,027
Contingency	29,457		
<b>TOTAL</b>	<b>\$349,027</b>	<b>TOTAL</b>	<b>\$349,027</b>

**City of Gilbert**

**Grant Amount: \$223,000**

Collaborative project to extend new waterline from Gilbert to McKinley. Gilbert will extend new waterline from Indiana Avenue to Broadway Street. McKinley will extend new waterline from Broadway Street to McKinley. The project is projected to create 13 construction jobs.

<u>USES</u>		<u>SOURCES</u>	
Water line	\$1,505,222	IRRRB	\$223,000
A&E	305,165	McKinley	350,000
Contingency	150,613	CDBG	200,000
		State	1,188,000
<b>TOTAL</b>	<b>\$1,961,000</b>	<b>TOTAL</b>	<b>\$1,961,000</b>

**\*Greenway Township****Grant Amount: \$100,000**

Phase II infrastructure and site work for a new emergency services facility. This is a collaborative facility with Coleraine, Bovey and Greenway Township.

<u>USES</u>		<u>SOURCES</u>	
Infrastructure and site work	\$310,000	IRRRB	\$100,000
Building	472,000	Township/Cities	198,000
Land	67,000	IRRRB(FY14)	350,000
A&E	49,000	State	250,000
<b>TOTAL</b>	<b>\$898,000</b>	<b>TOTAL</b>	<b>\$898,000</b>

**\*City of Hibbing****Grant Amount: \$150,000**

Phase II infrastructure and site work for a new Hampton Inn Hotel Development. The project is projected to create 69 construction jobs.

<u>USES</u>		<u>SOURCES</u>	
Infrastructure and site work	\$730,000	IRRRB	\$150,000
Building construction	9,000,000	City	900,000
A & E	660,000	IRRRB(FY12)	530,000
Contingency	190,000	Developer	9,000,000
<b>TOTAL</b>	<b>\$10,580,000</b>	<b>TOTAL</b>	<b>\$10,580,000</b>

**City of Hibbing****Grant Amount: \$250,000**

Infrastructure improvements include sanitary sewer line replacement, storm sewer upgrades and water main looping in the Brooklyn area from East 16<sup>th</sup> Street to Highway 169. This infrastructure serves a large residential section of the city and the Highway 169 Business District Corridor.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer and gas extension	\$1,062,913	IRRRB	\$250,000
A & E	276,357	City	1,248,707
Contingency	159,437		
<b>TOTAL</b>	<b>\$1,498,707</b>	<b>TOTAL</b>	<b>\$1,498,707</b>

**City of Hoyt Lakes****Grant Amount: \$100,000**

Replacement of storm sewer water collection systems at five intersections throughout the city. The upgrades and replacements will help minimize the current rate of infiltration and inflow.

<u>USES</u>		<u>SOURCES</u>	
Storm sewer intersections	\$460,825	IRRRB	\$100,000
Engineering	78,342	City	485,250
Contingency	46,083		
<b>TOTAL</b>	<b>\$585,250</b>	<b>TOTAL</b>	<b>\$585,250</b>

**\*City of Keewatin**

**Grant Amount: \$20,000**

Phase II new water line to create water loop on 2<sup>nd</sup> Avenue East to 3<sup>rd</sup> Avenue East. The new waterline will alleviate water issues to an apartment building.

<u>USES</u>		<u>SOURCES</u>	
New water line 2 <sup>nd</sup> Avenue to 3 <sup>rd</sup> Avenue	\$34,000	IRRRB City	\$20,000 14,000
<b>TOTAL</b>	<b>\$34,000</b>	<b>TOTAL</b>	<b>\$34,000</b>

**City of Keewatin**

**Grant Amount: \$200,000**

Storm sewer and road reconstruction for 3<sup>rd</sup> Street South and two adjacent alleys. Completion of the project will alleviate flooding and safety issues.

<u>USES</u>		<u>SOURCES</u>	
Storm Sewer and road reconstruction	\$198,108	IRRRB City	\$200,000 56,000
A&E	38,082		
Contingency	19,810		
<b>TOTAL</b>	<b>\$256,000</b>	<b>TOTAL</b>	<b>\$256,000</b>

**\*City of LaPrairie**

**Grant Amount: \$150,000**

The project consists of new municipal sewer line along LaPrairie Avenue, Glenwood Drive and Northland Street, as well as the total road reconstruction of LaPrairie Avenue and Glenwood Drive, to support new business expansion in their existing business park. The project is projected to create 18 permanent jobs and 61 construction jobs.

<u>USES</u>		<u>SOURCES</u>	
LaPrairie Avenue and Glenwood Drive road reconstruction	\$3,523,325	IRRRB DEED City	\$150,000 175,000 416,055
Building and equipment	5,000,000	Itasca County	3,300,000
Sewer line extension	635,000	Schwartz Excavating	4,800,000
A & E	178,726	Northern Erectors	200,000
Contingency	111,455	IRRRB(FY14) State	150,000 257,451
<b>TOTAL</b>	<b>\$9,448,506</b>	<b>TOTAL</b>	<b>\$9,448,506</b>

**\*Town of Lutsen**

**Grant Amount: \$300,000**

The Phase II portion of the project is comprised of erosion control and clearing, mass grading, drainage, reconstruction of greens, grassing and a landscaping and irrigation system at the Superior National Golf Course. 80% of business in Cook County is tourism. The project is projected to create 29 construction jobs.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Golf course construction	\$4,456,401	IRRRB	\$300,000
A&E	378,316	Cook County	4,537,456
Contingency	302,739	IRRRB(FY13)	300,000
<b>TOTAL</b>	<b>\$5,137,456</b>	<b>TOTAL</b>	<b>\$5,137,456</b>

**City of Marble**

**Grant Amount: \$250,000**

The project consists of replacement of waterline at five locations throughout the city. The existing infrastructure is deteriorated and has numerous breaks, which is limiting the capacity for the city to provide households with quality drinking water.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Water and road	\$415,000	IRRRB	\$250,000
A&E	84,000	City	92,000
Contingency	41,000	State	198,000
<b>TOTAL</b>	<b>\$540,000</b>	<b>TOTAL</b>	<b>\$540,000</b>

**\*City of Mt. Iron**

**Grant Amount: \$60,000**

The project consists of the replacement of 500 feet of storm sewer interceptor. The collapse of sewer interceptor would impact 34 homes and eight businesses.

<u>USES</u>		<u>SOURCES</u>	
Storm sewer	\$140,000	IRRRB	\$60,000
A&E	30,000	CDBG	50,000
		City	60,000
<b>TOTAL</b>	<b>\$170,000</b>	<b>TOTAL</b>	<b>\$170,000</b>

**\*City of Mt. Iron**

**Grant Amount: \$90,000**

The project consists of the replacement of force main, which will eliminate the need to upgrade an existing lift station that is vital to the city's wastewater system. Currently, 65% of the city's wastewater flows through this main, which impacts major employers and numerous households.

<u>USES</u>		<u>SOURCES</u>	
Storm sewer	\$160,000	IRRRB	\$90,000
A&E	40,000	City	110,000
<b>TOTAL</b>	<b>\$200,000</b>	<b>TOTAL</b>	<b>\$200,000</b>

**City of Nashwauk**

**Grant Amount: \$83,000**

Sewer, water, storm sewer and street reconstruction on Platt Avenue from 4<sup>th</sup> Street to the East.

<u>USES</u>		<u>SOURCES</u>	
Water, sewer, storm sewer		IRRRB	\$83,000
and street restoration	\$130,000	City	83,000
A&E	23,000		
Contingency	13,000		
<b>TOTAL</b>	<b>\$166,000</b>	<b>TOTAL</b>	<b>\$166,000</b>

**City of Orr**

**Grant Amount: \$53,099**

Sewer line replacement and road reconstruction on Highway 23. Approximately two-thirds of the residents in Orr will benefit from the improved sewer line.

<u>USES</u>		<u>SOURCES</u>	
Sanitary sewer lines	\$81,860	IRRRB	\$53,099
Road reconstruction	475,000	CDBG	53,209
A & E	16,372	County	475,000
Contingency	8,186	City	110
<b>TOTAL</b>	<b>\$581,418</b>	<b>TOTAL</b>	<b>\$581,418</b>

**\*Range Regional Airport**

**Grant Amount: \$250,000**

The project includes three phases. Phase I is the expansion of the taxiway to meet FAA requirements. Phase II is comprised of the construction of a new 20,912 sq. ft. terminal building for the Range Regional Airport. Phase III reconstructs the aircraft parking apron. The project is expected to create 124 construction jobs.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Terminal Ramp reconstruction	\$5,000,000	IRRRB	\$250,000
Terminal construction	10,132,985	FAA	12,159,222
Taxiway expansion	2,205,380	MNDOT	1,056,578
A & E	1,800,000	Bond	5,000,000
		IRRRB(FY12)	150,000
		Airport	522,565
<b>TOTAL</b>	<b>\$19,138,365</b>	<b>TOTAL</b>	<b>\$19,138,365</b>

**City of Silver Bay**

**Grant Amount: \$150,000**

Replacement and rehabilitation of tertiary clarifiers at the Silver Bay wastewater treatment facility.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Tertiary rehab and replace	\$294,150	IRRRB	\$150,000
A&E	47,050	City	201,200
Contingency	10,000		
<b>TOTAL</b>	<b>\$351,200</b>	<b>TOTAL</b>	<b>\$351,200</b>

**City of Taconite**

**Grant Amount: \$100,000**

Replacement and rerouting of substandard water main lines and installation of additional fire hydrants to increase fire protection and improve water quality in the Holman Addition area.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Water and hydrants	\$251,755	IRRRB	\$100,000
A&E	47,833	City	224,763
Contingency	25,175		
<b>TOTAL</b>	<b>\$324,763</b>	<b>TOTAL</b>	<b>\$324,763</b>



**\*Tofte Township****Grant Amount: \$120,000**

Phase II water, sewer, roads, and site work for the construction of ten new market-rate housing units. Tofte Township has identified senior housing needs as a top priority due to lack of housing in the region. The project is projected to create 14 construction jobs.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Building Construction	\$1,451,983	IRRRB	\$120,000
Land	170,000	Township	220,983
Water, sewer and site work	475,000	Bond	1,654,000
A & E	128,000	IRRRB(FY14)	230,000
<b>TOTAL</b>	<b>\$2,224,983</b>	<b>TOTAL</b>	<b>\$2,224,983</b>

**\*City of Two Harbors****Grant Amount: \$150,000**

Phase II water, sewer and site work for a new 3,200 sq. ft. retail/manufacturing facility and trail relocation. The project is projected to create 2 permanent jobs and 14 construction jobs.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Building construction	\$470,000	IRRRB	\$150,000
Water and sewer	462,375	City	143,850
Land	64,000	Developer	1,015,744
Equipment	200,000	IRRRB(FY14)	276,500
Trail Relocation	479,726	Federal Grant	343,319
Working capital	200,000	DNR Grant	100,000
Wetland	105,077	TH Area Fund	50,000
A&E	98,235		
<b>TOTAL</b>	<b>\$2,079,413</b>	<b>TOTAL</b>	<b>\$2,079,413</b>

**Town of White****Grant Amount: \$150,000**

Phase III Gardendale area and Phase IV Spruce Street water and sewer line replacement.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Water, sewer and site work	\$560,230	IRRRB	\$150,000
A & E	81,114	Township	417,200
Contingency	75,856	IRRRB(FY14)	150,000
<b>TOTAL</b>	<b>\$717,200</b>	<b>TOTAL</b>	<b>\$717,200</b>

**\*Town of White**

**Grant Amount: \$1,500,000**

The project is collaboration between Northeast Service Cooperative and Frontier Communications to provide 97 miles of new fiber and equipment upgrades. The project provides direct fiber connections for 23 town hall/fire halls and extends fiber to improve service for 2,262 underserved Frontier subscribers in 13 townships at speeds exceeding the state broadband goal. The project will pass 9,400 underserved households that will have the opportunity to connect at speeds exceeding the state goal. The project is projected to create 31 construction jobs.

<u><b>USES</b></u>		<u><b>SOURCES</b></u>	
Fiber Infrastructure	\$4,560,000	IRRRB	\$1,500,000
A & E	240,000	DEED	2,400,000
		Frontier	750,000
		NESC	150,000
<hr/> <b>TOTAL</b>		<b>TOTAL</b>	<hr/> \$4,800,000

## **Mining Reinvestment Fund**

- a. ArcelorMittal Minorca Mine
- b. Hibbing Taconite Company
- c. Northshore Mining Company
- d. United Taconite Company
- e. US Steel – Keetac
- f. US Steel – Minntac
- g. Mesabi Nugget, LLC
- h. Mining Resources, LLC
- i. Magnetation, LLC

**ArcelorMittal Minorca Mine**



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Fax: (218)735-3047

**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: ARCELORMITTAL MINORCA MINE MINING REINVESTMENT FUND\* PROJECTS - \$818,240**

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ArcelorMittal Minorca is eligible for a rebate of \$818,240, subject to the company providing a minimum match of \$818,240, for a minimum total project cost of \$1,636,480.

The ArcelorMittal - Minorca Mining Reinvestment Fund Review Committee completed its review on November 17, 2014, and unanimously approved submitting the following two (2) projects which will share the MRF rebate.

**Project 1 – Cobber Magnetic Separator Improvements - \$780,000**

Minorca operates 3 cobber magnetic separators on each of its three concentration lines. Two of the three cobbbers on each line are newer single drum units that were installed in 2005-2007. The remaining cobbbers on each line are old drum units that are less efficient and only allow lower throughput. It's proposed to upgrade the separators on Lines 2 and 3 to single drum units and improve the cobber fed distribution system, thereby improving iron recovery and reducing spillage.

**Project 2 – Process Gas Scrubber Stack Replacement - \$1,100,000**

The Minorca Mine has four process gas scrubber stacks that exhaust gases from the pelletizing process. "C" and "D" stacks are original equipment and have deteriorated with age (37 years). The new stacks will be fabricated locally.

**Hibbing Taconite Company**



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: HIBBING TACONITE COMPANY MINING REINVESTMENT FUND\* PROJECTS - \$2,274,624**

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Hibbing Taconite Company is eligible for a rebate of \$2,274,624, subject to the company providing a minimum match of \$2,274,624, for a minimum total project cost of \$4,549,248.

The Hibbing Taconite Company Mining Reinvestment Fund Review Committee completed its review on December 3, 2014, and unanimously approved submitting the following four (4) projects which will share the MRF rebate.

**Project 1 – Guarding of Potential Hazards - \$500,000**

Design, fabricate, and install guards over or around machinery in motion to protect employees from potential hazards due to inadvertent contact. Guarding will improve safety and bring machine guards into MSHA compliance.

**Project 2 – Filtercake Reclaim Upgrade - \$2,400,000**

The existing filtercake reclaim hopper and apron feeder will be replaced with an upgraded system which is necessary to return stockpiled filtercake back into the pelletizing process. During the cold winter months the stockpile freezes which requires the large chunks of filter cake to be rigorously moved around to break them down to size. Also, the current system needs more capacity to accommodate the large chunks which cannot be easily returned to processing lines when the material is frozen.

**Project 3 – Rebuild Plant Infrastructure - \$500,000**

Inspection and replacement of structural steel in the crusher, concentrator, and pellet plant is conducted by trained infrastructure crews. Worn or damaged support beams and floor beams that need repair or replacement will be identified, prioritized, and scheduled to be replaced and/or rebuilt to provide a safe work environment and extend the life of the plant.

#### **Project 4 – Albany Pumps and Pipeline Replacement - \$1,600,000**

In what is known as the Webb area, HTC has begun mining in the proximity of the Albany and Longyear mine pits between Chisholm and Hibbing. As mining progresses deeper in elevation, it is necessary to dewater these previously mined and water filled pits. This water will be piped to the plant to provide make up water for processing.

## Northshore Mining Company



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: NORTHSHORE MINING COMPANY MINING REINVESTMENT FUND\* PROJECTS - \$1,600,862**

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Northshore Mining Company is eligible for a rebate of \$1,600,862, subject to the company providing a minimum match of \$1,600,862, for a minimum total project cost of \$3,201,724.

The Northshore Mining Company Review Committee completed its review on November 12, 2014, and unanimously approved submitting the following two (2) projects which will share the MRF rebate.

### **Project 1 – Direct Reduction (DR) Grade Pellets – Primary - \$2,237,535**

Cliff Natural Resources conducted a feasibility study to evaluate the economic potential of producing DR pellets at the Northshore Mining operation in Silver Bay, Minnesota, and the ability to sell this product to one or more customers in the Great Lakes Basin. The potential for Cliffs to supply DR grade pellets in the US is based on the assumption that Northshore production of DR grade pellets is both technically and economically feasible and that the product will be competitively priced and of acceptable DR grade quality for potential customers. DR grade pellets are chemically and physically superior to standard blast furnace grade pellets.

Northshore conducted test work using two (2) full scale concentrating circuits for 1.5 years to determine if reasonable iron recovery was possible making a DR grade concentrate. One circuit operated at lowered silica levels (DR grade) and the other circuit continued making standard blast furnace grade concentrate. Tests results showed that a DR grade concentrate could technically be produced with good iron recovery.

The next step in the development was to determine if the existing pellet lines could produce the required pellet quality. A two week continuous plant test was conducted feeding one small pellet machine with DR grade concentrate producing DR grade pellets. Many samples of concentrate and pellets were collected, analyzed and tested to define overall iron recovery and pellet quality. Pellets were sent to outside companies, laboratories, and technology providers that sell or operate gas based DRI plants for in-situ testing. Northshore pellet quality was acceptable as a DR grade product.

The feasibility study conclusion is that DR grade pellet production at Northshore is technically achievable and can be economically viable if a customer base can be secured. It has been demonstrated through testing that the final pellet product quality can meet the stringent DR grade requirements for chemistry, physical sizing, and metallurgical performance.

## **Project 2 – Fine Crusher Assemblies - \$2,469,000**

Northshore Mining Company uses a Fine Crusher stage at its Silver Bay plant facility. The Fine Crusher currently has 6 of 10 lines activated and in operation to support a 6 million ton pellet production level. Northshore installed 3 replacement crusher assemblies outfitted with hydraulic clamping and clearing capability on their 7' XHD crusher adjustment rings. The function of the adjustment ring on the 7'XHD crusher is to ensure the two crushing wear liners are set to the proper gap for quality and throughput control.

The existing clamping units are controlled by 16 spring packs that apply clamping capability to the crusher. After investigating the condition of the existing springs in 2011, it was determined that they have exhausted their life cycle and cannot hold the proper clamping pressure needed for proper sizing and throughput control. As crusher assemblies reach predicted failure hours, they are sent offsite for rebuilding. Hydraulic clamping and clearing capability will be added to the assembly in place of spring packs.

There is a significant safety issue with the existing spring clamps when tramp steel gets lodged in the crusher. The current procedure is very unsafe as an individual is required to burn the tramp metal from in between the liners with a tremendous amount of force held from the compressed springs on the tramp steel. Over the years there have been many efforts to come up with a safe procedure with no success. The hydraulic adjustment ring offers the advantage of mechanically releasing the crusher when a crusher plugs.

The three hydraulic clamping and clearing adjustment rings that were installed is an addition to one that has been in use at Northshore. Testing completed during 2011 comparing the hydraulics-equipped line and a traditional spring clamp-equipped crusher line showed significant performance improvement in crusher throughput rates (45 TPH per line).

This improvement makes removing tramp metals from the crusher much safer and easier as the crusher will hydraulically clear with the push of a button. Down time for a plugged crusher decreases from days to minutes resulting in more reliability, greater production, a safer environment, and decreased operational costs.



United Taconite LLC



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: UNITED TACONITE, LLC MINING REINVESTMENT FUND\* PROJECTS - \$1,595,023**

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United Taconite, LLC is eligible for a rebate of \$1,595,023, subject to the company providing a minimum match of \$1,595,023, for a minimum total project cost of \$3,190,046.

The United Taconite Mining Reinvestment Fund Review Committee completed its review on November 7, 2014, and unanimously approved submitting the following project.

**Project 1 – Furnace Line 2 Cooler, Fairlane Plant - \$3,800,000**

United Taconite's indurating machine is a Grate-Kiln-Cooler System. The cooler in the Grate-Kiln-Cooler system has two basic functions. First, to cool the pellets which have been heat hardened in the traveling grate and kiln so they can be handled conveniently, and second, to furnish preheated secondary air to the preheat section of the grate.

The current cooler was purchased used from the Redcar Mine in England in 1990. Due to corrosion and many years of service, the cooler frame is experiencing fatigue. Corrosion and wear to the main girder and support columns are contributing to the operational issues caused by this machine. Utac is also observing that the cooler frame is cracking causing an unlevel condition throughout the machine. When the machine goes out of level it is operationally difficult to make a quality product cost effectively. The cooler has become the main source of unscheduled downtime in the past few years and will continue to escalate downtime until the frame is replaced.

This project will take 18 months to complete with an estimated total cost of \$9.5 million. United Taconite will spend \$3.8 million on this project in 2014 and the remaining expenditures to complete the project will occur in 2015.



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: USS - KEETAC MINING REINVESTMENT FUND\* PROJECTS - \$1,512,049**

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US Steel – Keetac is eligible for a rebate of \$1,512,049, subject to the company providing a minimum match of \$1,512,049, for a minimum total project cost of \$3,024,098.

The USS - Keetac Mining Reinvestment Fund Review Committee completed its review on October 2, 2014, and unanimously approved submitting the following five (5) projects which will share the MRF rebate.

**Project 1 – Fine Screening Upgrade - \$2,400,000**

The Keetac Concentrator operates five secondary grinding lines. These secondary grinding lines utilize multi-feed single deck vibrating screens to perform primary and fine screening. The fine screens serve as the final checkpoint before material becomes concentrate, suitable for pelletizing. All material that passes through the screens moves on to the pellet plant, while anything passing over the screen is returned to the grinding mill for further size reduction. The existing single deck fine screens (circa 1980's) are inefficient when operating at today's higher production rates, resulting in a large amount of fine material being sent back to the grinding mill. These fines are called "misplaced fines" as they have been incorrectly placed in the oversize when they should have continued on to the pellet plant.

In order to reduce the amount of misplaced fines and to increase production, the existing multi-feed screens are being replaced with Derrick Stack Sizers. These new machines each consist of up to five screen decks stacked vertically so that the screening area can be increased while maintaining a small foot print. Additionally, the screen panels are made of urethane, rather than wire cloth, which has improved screen panel life dramatically. Upgrading to Stack Sizer fine screens has shown a significant line production improvement.

**Project 2 – Tails Basin Reclamation and Dust Control - \$550,000**

The Keetac active tailings pond is 2,500 acres in size and has a perimeter of 44,000 feet. Annually, 12,000 linear feet of this perimeter is built up by six feet by discharging tailings and pushing the coarse tails to build the dike. The tailing beaches in the 12,000 lineal feet of new deposition vary in

width from the dike to the water from 600 to 2,000 feet. The tailing beaches starting at the perimeter dike consist of medium tailings; second, the medium and the fine tailings; and third, the fine tailings. The water carries the medium and fine tailings flow into the interior of the pond, finally settling out in the interior water reservoir.

Keetac is required to develop and execute an annual reclamation activity plan by the MDNR and control dust to levels established by the MPCA. The annual vegetation and tree planting activity on the Tails Basin is used to satisfy the requirements of both of these agencies.

Seed and fertilizer are applied to bare areas of soil on inactive areas of the basin by using special low ground pressure seeding equipment. Various seed mixtures are used depending upon if the mix is needed for temporary or permanent seeding. Temporary vegetated areas are seeded within the basin during March and April while the ground is still frozen. Permanent seeding activities on the outer slopes are generally completed in May. The soil nutrient levels are very low, significant amounts of fertilizer is required to sustain plant growth. In lieu of chemical fertilizer, bio solids have been a successful alternative.

The use of hay mulch has been an effective method of controlling dust on the tails basin. Mulch is spread by either bale busters which are pulled by low ground pressure tractors or mulch can be spread effectively by a helicopter. Tractors and other ground equipment can only be used when the ground is dry or frozen. The use of helicopters is needed in areas where the ground is wet, which is normally in areas where tails have been recently deposited.

Native trees are used to enhance the perimeter of the Tails Basin. The benefits of trees include acting as a buffer for the operation, and they have proved effective as a means of windbreak reducing fugitive dust. The trees that are used are purchased from local nurseries or grown from seed and cuttings collected from the Keetac property. An excess of 15,000 trees are planted annually.

### **Project 3 – Carlz Pit Water Supply - \$400,000**

Keetac's Reservoir 5 pit dewatering basin provides process make-up water to the Plant. Keetac is in the process of mining through Reservoir 5 which will eliminate this reservoir. The nearby Carlz Pit has been identified as an optimal location to create a new water reservoir because of its close proximity to the Plant and its adequate volume to accommodate seasonal fluctuations. Additionally the Wolf Hill process water reservoir has reached the end of its useful life and is beyond repair. This project proposes a new pump transfer station to transfer water from the Carlz Pit to a new Wolf Hill storage tank for plant process water, as well as infrastructure and piping to redirect the existing mine dewatering sumps to the Carlz Pit.

### **Project 4 – Tailings Pipe Replacement - \$400,000**

Keetac pumps its waste material (tailings) through a series of 40' long, 22" diameter, rubber lined pipe to the tailings basin. This span of pipe is approximately 6 miles in length and crosses U.S. Highway 169. The piping over this span of the highway has a thicker rubber lining than the remainder of the pipe to add additional safety factors. In April 2014, 46 lengths of pipe stretching over the highway were replaced. The job entailed the procurement of 46 lengths of pipe with ½" rubber lining, road closure permits from MDOT for the four lane highway during replacement, highway traffic diversion during replacement, and manpower and equipment for the replacement.

This pipeline is essential to the operation of the Keetac facility as 2/3 of the material brought into the plant for processing is waste and is deposited through this pipeline system.

**Project 5 – Potable Water Storage Tank - \$150,000**

The existing 35,000 gallon water tank was installed in 1965 and has supplied the facility with potable water for nearly 50 years. The condition of the tank has deteriorated to the point of requiring replacement. This project will erect a new potable water storage tank of similar size to replace the deteriorating one.



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: USS – MINNTAC MINING REINVESTMENT FUND\* PROJECTS - \$3,969,214**

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US Steel - Minntac is eligible for a rebate of \$3,969,214, subject to the company providing a minimum match of \$3,969,214, for a minimum total project cost of \$7,938,428.

The USS - Minntac Mining Reinvestment Fund Review Committee completed its review on August 6, 2014, and unanimously approved submitting the following four (4) projects which will share the MRF rebate.

**Project 1 – Sulfate Compliance #6 Sump - \$8,000,000**

The Mt. Iron Pit reservoir is the single source of potable and process makeup water for daily operations at Minntac. Water inflow to the reservoir occurs from natural runoff, is pumped from either the #3 or #2 mine dewatering sumps, or pumped from the West Two Rivers Reservoir (W2RR). Water currently pumped from the W2RR to the Mt. Iron pit impacts potable water quality. W2RR levels have dropped in recent years due to dry weather condition, which limits the volume of water available for process water makeup operations and could limit future pellet production.

Additionally, U.S. Steel is operating under a Minnesota Pollution Control Agency (MPCA) Schedule of Compliance agreement to address a number of environmental issues, including noncompliance related to sulfate in the process water supply from the tailings basin. Currently, the #6 pump discharges offsite, approximately one billion gallons every year of high quality water from the West Pits. This water would be an excellent source of water to mitigate the sulfate issue.

Therefore, Minntac will redirect the #6 Sump water to a newly created sump adjacent to the Mt. Iron Pit that will serve as the source of the process makeup water. This additional makeup water will reduce the sulfate level in the process water loop, isolate the pit dewatering and the W2RR volumes from the potable water source, and reduce off-site water discharges from the #6 sump. The project includes the installation of a new process water sump, larger dewatering pumps in the #6 sump and approximately 6 miles of discharge pipe.

## **Project 2 – Concentrator Finisher Upgrades - \$5,000,000**

Magnetic separation is key to the Minntac iron concentrating process. Crude ore is separated into iron ore and waste materials such as silica using finisher magnetic separators. The existing Minntac separators are 3 feet by 10 feet in size, were installed in the 1960's, and use outdated technology. State of the art separators are now 4 feet by 10 feet in size, are equipped with stronger magnets and have a different flow pattern optimizing flushing water use and ore extraction. New 4 x 10 separators were installed as test units on Concentrating Line 5 in 2004 and 2007. The Line 5 separator trials were a success and proved the separators increase iron ore extraction and reduce downstream silica.

The scope of this project is to purchase and install (36) state-of-the art 4 x 10 finisher magnetic separators for the fifteen remaining operating lines at Minntac. The new 4 x 10 separators feature a double drum design that reduces the number of magnetic drums from 210 to 76, thus reducing operating electricity and maintenance costs. Silica content in the concentrate is significantly reduced and this results in less chemical usage downstream.

## **Project 3 – Agglomerator Step II Concentrate Reclaim Upgrade - \$1,900,000**

The Agglomerator Step II reclaims concentrate from an outdoor storage pile to supplement the feed from the Concentrator to maintain pellet production levels. The current method of reclaiming concentrate utilizes a front end loader to scoop the material from the pile and dump the load over a coarse stationary screen positioned over a hopper. The material is fed from the hopper onto a series of conveyor belts to introduce the material back into the process. This method is unreliable especially during the winter months. Frozen material often passes through the screen deck causing plugging in the conveyor feed chute, housekeeping issues near the conveyor belts in the Agglomerator, and mixer damage in the balling circuit. A contractor is periodically used during the winter to screen and crush material before entering the reclaim feed hopper.

This project will involve installation of a concentrate reclaim system. The system will consist of a vibratory screen and crusher to reduce the frozen oversize concentrate material into a feedstock suitable for use in the Step II indurating lines.

## **Project 4 – Fine Screening Upgrade Line 16 - \$1,800,000**

The Minntac Concentrator utilizes single deck vibrating screens for fine screening size separation prior to flotation on all sixteen secondary grinding circuits. These single deck fine screens are inefficient when operating at today's higher production rates.

In October 2013, Keetac installed a new multi-deck screen that replaced three of the six single deck screens on the Secondary Line 4 fine screening circuit. This configuration allowed for a direct comparison of the performance of the new and existing technologies under the same line operating parameters.

The increased efficiency associated with the new multi-deck vibrating screens at Keetac resulted in a 0.28 percent silica reduction in the final concentrate going to agglomeration. Additionally, laboratory testing with Minntac concentrate has shown a potential 1.0 percent reduction in silica while maintaining the same screen feed rates.

Minntac will purchase and install four multi-deck vibrating screens on Secondary Line 16. The conversion of the fine screens on an entire secondary line will enable the plant to further quantify benefits and screen size associated with the conversion of the fine screens on the remaining fifteen lines. Utilizing results from the Keetac trial and laboratory testing using Minntac concentrate, a 0.45 percent silica reduction in flotation feed is expected at the same feed rates. The silica reduction will result in iron recovery yield improvements in the flotation process.



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: MESABI NUGGET, LLC MINING REINVESTMENT FUND\* PROJECTS - \$54,060**

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Mesabi Nugget, LLC is eligible for a rebate of \$54,060, subject to the company providing a minimum match of \$54,060, for a minimum total project cost of \$108,120.

The Mesabi Nugget, LLC Mining Reinvestment Fund Review Committee completed its review on November 12, 2014, and unanimously approved submitting the following project.

**Project 1 - Lime and Soda Ash Make-up System - \$139,000**

Compared to the other Iron Range taconite facilities, the water treatment process for the Mesabi Nugget operation is more complex which has resulted in numerous start-up and optimization challenges. For this project, the current volumetric lime and soda ash feeders will be changed to a gravimetric design. In addition, the necessary make-down tank and systems will be moved into one of our water treatment buildings, which will eliminate some of the current winter and stability challenges. The system will consist of gravimetric feeders, screw conveyors, and new electrical systems along with the upgrades associated with the relocation of the tanks and pumps. The end result of these changes will be improved stability of the water treatment system and ultimately, improved quality of the water discharged from the system.

This project is another example of the continued investment into the Mesabi Nugget process and the ideas being generated by the engineers and workforce in an effort to improve not only the cost structure of the operation, but the impact on the environment as well. This project will be completed during 2015.



**Mining Resources, LLC**



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: MINING RESOURCES, LLC MINING REINVESTMENT FUND\* PROJECTS - \$88,460**

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Mining Resources, LLC is eligible for a rebate of \$88,460, subject to the company providing a minimum match of \$88,460, for a minimum total project cost of \$176,920.

The Mining Resources, LLC Mining Reinvestment Fund Review Committee completed its review on November 12, 2014, and unanimously approved submitting the following project.

**Project 1 – Development of the Sherman Fine Tailings Basins - \$13,000,000**

Over the last several years, Mining Resources has successfully mined and concentrated fine iron ore tailings from the Duncan-Douglas-Dunwoody basins and the Niles basin southeast of Chisholm, MN. As they deplete the mineral bodies at these sites, their focus is now concentrated upon developing the Sherman basin complex in order to continue producing concentrate for their customers.

Developing future basins is an integral part of the Mining Resources project to insure that the plant remains operational. A new facility will be built containing a truck dump hopper, pan feeder, conveyors, screens, and slurry pumping systems at the Sherman tailings basin site. This new building will pump plant feed material to the processing facility through new HPDE slurry lines. The new building will include necessary foundations and structural steel to support the processing equipment.

This project is another example of the many ways Mining Resources is investing in its future while continuing to utilize previously processed iron ore resources. This project will commence in the fourth quarter of 2014 and continue through 2015 in preparation for this area becoming Mining Resources' next series of mining basins to feed its concentrator.

Magnetation, LLC



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: MAGNETATION, LLC MINING REINVESTMENT FUND\* PROJECTS - \$709,404**

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Magnetation, LLC is eligible for a rebate of \$709,404, subject to the company providing a minimum match of \$709,404, for a minimum total project cost of \$1,418,808.

The Magnetation, LLC Mining Reinvestment Fund Review Committee completed its review on November 12, 2014, and unanimously approved submitting the following project.

**Project 1 – Plant 4, 17’ x 32’ Gear Driven Ball Mill (Primary Mill) - \$4,011,500**

Plant 4’s construction includes two ball mills. The primary mill, which is being submitted as this year’s project, assists in the liberation of iron particles from feed material. The primary ball mill significantly increases the plant’s ability to recover iron from feed material, both in terms of weight and iron recovery. This equipment is critical to the overall production capabilities of the plant.

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*\*Minnesota Statutes 298.227, authorize grants to Minnesota’s taconite producers for workforce development and associated public facility improvement, or for acquisition of plant and stationary mining equipment and facilities for the producer or for research and development in Minnesota on new mining, or taconite, iron, or steel production technology, but only if the producer provides a matching expenditure equal to the amount of the distribution to be used for the same purpose. These funds are held in the Mining Reinvestment Fund.*

*Effective for proposals for expenditures of money from the fund beginning May 26, 2007, the commissioner may not release the funds before the next scheduled meeting of the board. If a proposed expenditure is not approved by the board, the funds must be deposited in the Taconite Environmental Protection Fund under sections 298.222 to 298.225.*

## Education Innovation Partners (EIP)



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**To:** Iron Range Resources and Rehabilitation Board Members

**From:** Tony Sertich  
Commissioner

**Date:** December 18, 2014

**Re: EDUCATION INNOVATION PARTNERS**

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Northeastern Minnesota has a proud tradition of investing in education that prepares students for a successful future. The IRRRB has embraced the strategy of Education Based Economic Development by making historic investments that support the agency's mission to promote and invest in education and workforce development that will both allow our existing businesses to grow and attract new business. In addition, these investments retain our region's youth and strengthen our rural communities.

Educational leaders in the region remain committed to upholding this proud legacy of educational excellence. However students, teachers, parents and communities face daunting challenges in doing so. Issues such as declining enrollment, constricting budgets, cultural changes and growing expectations threaten the ability of our rural school districts to provide students with equal access and opportunities for world class educational experiences regardless of their geographic location.

In the midst of these and other challenges, regional educational leaders have developed a successful history and process for joining together as a region to create innovative and collaborative solutions. In 2006 regional school districts and the five colleges of the Northeast Higher Education District (NHED) developed the Applied Learning Institute (ALI) to renew technical education. Since inception over 8,000 students have participated in ALI by taking college level, project based courses available at their high school and ladder into programs at one of the NHED member colleges. As a result enrollment in the technical programs at NHED campuses has increased over 75%.

Building on the success of ALI and the strategic regional collaboration that created it, educational leaders asked themselves the following question. What now can we do together to address education as a whole? In 2011 a Call to Action was issued and Education Innovation Partners (EIP) was created for the purpose of providing students equal access to world class educational experiences regardless of their zip code. During the 2014 legislative session the Iron Range Legislative Delegation championed legislation that provides for the formation of an "innovative cooperative center" known as Education Innovation Partners. A strategic plan has been developed and a governance structure adopted. The three initial areas of focus identified for immediate action are Teaching and Learning Academies, Personalized Academic and Career Plans and an Integrated Regional Technology Platform. Education Innovation Partners is requesting an investment of \$2,000,000 to continue their regional work. The funding source of this request is the Taconite Environmental Protection Fund (TEPF.)